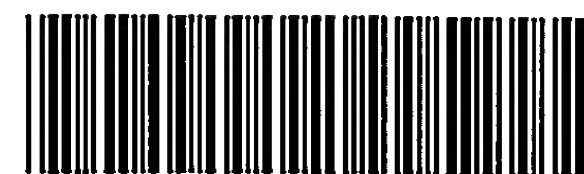


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/993,808D
Source: 1FW/6
Date Processed by STIC: 10/19/05

ENTERED



IFW16

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/993,808D

DATE: 10/19/2005

TIME: 15:08:07

Input Set : A:\1146E.SEQLIST.TXT

Output Set: N:\CRF4\10192005\I993808D.raw

4 <110> APPLICANT: Gordon-Kamm, William
 5 Lowe, Keith
 6 Sun, Yuejin
 7 Dilkes, Brian
 8 Larkins, Brian
 11 <120> TITLE OF INVENTION: Cell Cycle Nucleic Acids, Polypeptides,
 12 and Uses Thereof
 14 <130> FILE REFERENCE: 1146E
 C--> 16 <140> CURRENT APPLICATION NUMBER: US/09/993,808D
 C--> 16 <141> CURRENT FILING DATE: 2001-11-06
 16 <160> NUMBER OF SEQ ID NOS: 12
 18 <170> SOFTWARE: FastSEQ for Windows Version 3.0
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 1372
 22 <212> TYPE: DNA
 23 <213> ORGANISM: zea mays
 25 <220> FEATURE:
 26 <221> NAME/KEY: CDS
 27 <222> LOCATION: (134)...(902)
 29 <400> SEQUENCE: 1
 30 cccacgcgtc cggacgcaag cggctgcagg cagcagcgcc gcgcaggcgt tgtggcctgt 60
 31 gggagaggaa aaagagaaag aggaaccggc caagacaagc aagcgagagg ccagggccgc 120
 32 ggcgttgctg cag atg ggg aag tac atg cgc aag tgc agg ggc gcc gca 169
 33 Met Gly Lys Tyr Met Arg Lys Cys Arg Gly Ala Ala
 34 1 5 10
 36 ggc gcg gag gtc gcc gcc gtc gag gtt acg cag gtc gtc ggc gtc cgg 217
 37 Gly Ala Glu Val Ala Ala Val Glu Val Thr Gln Val Val Gly Val Arg
 38 15 20 25
 40 acg agg tcc agg tcc gcg gcg gcg acc ggc ggt gtc gcg aag gtc gcc 265
 41 Thr Arg Ser Arg Ser Ala Ala Ala Thr Gly Gly Val Ala Lys Val Ala
 42 30 35 40
 44 ccg agg agg aag agg gcg ccg gcg ggg gag cct gct gcc gcc gtg agc 313
 45 Pro Arg Arg Lys Arg Ala Pro Ala Gly Glu Pro Ala Ala Ala Val Ser
 46 45 50 55 60
 48 gct ggt ggg gac ggc gga agc tgc tac atc cac ctg cgt agc cgc atg 361
 49 Ala Gly Gly Asp Gly Gly Ser Cys Tyr Ile His Leu Arg Ser Arg Met
 50 65 70 75
 52 ctg ttc atg gca ccg cct cag ccg cag ccg tcg gtt gac tcg gtt ccg 409
 53 Leu Phe Met Ala Pro Pro Gln Pro Gln Pro Ser Val Asp Ser Val Pro
 54 80 85 90
 56 acc ccg gtg gag gct gct gat ggc gct gca gga cag cag ggc gcg gcg 457
 57 Thr Pro Val Glu Ala Ala Asp Gly Ala Ala Gly Gln Gln Gly Ala Ala
 58 95 100 105

P. 6

RAW SEQUENCE LISTING

DATE: 10/19/2005

PATENT APPLICATION: US/09/993,808D

TIME: 15:08:07

Input Set : A:\1146E.SEQLIST.TXT

Output Set: N:\CRF4\10192005\I993808D.raw

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60  ctc gcg gcc ggg ctc tcg cgt tgc tcc agc acg gcg tcg tcg gtg aac      505
61  Leu Ala Ala Gly Leu Ser Arg Cys Ser Ser Thr Ala Ser Ser Val Asn
62      110                      115                      120
64  ttg ggc ttg ggg ggt cag cgc ggg agc cac acc tgc cgc tcc tac gac      553
65  Leu Gly Leu Gly Gly Gln Arg Gly Ser His Thr Cys Arg Ser Tyr Asp
66  125                      130                      135                      140
68  gct gca gag gct ggc ggg gat cac gtc ctg gtg gat gtc tcg gcg gcg      601
69  Ala Ala Glu Ala Gly Gly Asp His Val Leu Val Asp Val Ser Ala Ala
70      145                      150                      155
72  agc aac tcc ggg agc ggc cca gac cgc gag agg cga gag acg acg cca      649
73  Ser Asn Ser Gly Ser Gly Pro Asp Arg Glu Arg Arg Glu Thr Thr Pro
74      160                      165                      170
76  tcg agc cgg gcg cac ggc gag ctc agc gat ctg gag tcg gat ctg gcg      697
77  Ser Ser Arg Ala His Gly Glu Leu Ser Asp Leu Glu Ser Asp Leu Ala
78      175                      180                      185
80  ggg cac aag act ggc ccg tcg cta ccg gcg gca acg ccg gct gcg gag      745
81  Gly His Lys Thr Gly Pro Ser Leu Pro Ala Ala Thr Pro Ala Ala Glu
82      190                      195                      200
84  ctg atc gtg ccg cca gca cac gag atc cag gag ttc ttc gcc gcc gcc      793
85  Leu Ile Val Pro Pro Ala His Glu Ile Gln Glu Phe Phe Ala Ala Ala
86  205                      210                      215                      220
88  gag gcg gcc cag gcc aag cgc ttt gct tcc aag tac aac ttc gac ttc      841
89  Glu Ala Ala Gln Ala Lys Arg Phe Ala Ser Lys Tyr Asn Phe Asp Phe
90      225                      230                      235
92  gtc cgc ggc gtg ccc ctc gac gcc ggc ggc cgg ttc gag tgg gcg ccg      889
93  Val Arg Gly Val Pro Leu Asp Ala Gly Gly Arg Phe Glu Trp Ala Pro
94      240                      245                      250
96  gtg gtc agc atc t gaagcgagcg tgcgtccggt gcaaggtgaa gctagaaaga      942
97  Val Val Ser Ile
98      255
100  gaaaagatgc cccccccccc cccccccaac aaacataacg gagaagagaa aaaccaaaaca      1002
101  attaagcagc tttatatagc ctaagctaac caccaccatt catctcgtcc aaatgcatgc      1062
102  cttgcttttc tctggagcta gcaggagcgt agttattatt tagtactact ttacttattc      1122
103  agaggttatc ttgaccccca tagatcaatc cgcttactgt gtaattttctc tcatgcatct      1182
104  cttagatgga gtttaatcgt cttaatttat tactgtacag cagcttgstt ggcttgcaaa      1242
105  gaaagatctg gtttgtctca aaaaaaaaaa aaaaaaaaaa aaaaaaaggc cggccgctct      1302
106  agaggatcca agcttacgta cgcgtgcatg cgacgtcata gctcttctat agtgtcacct      1362
107  aaattcattc      1372
109 <210> SEQ ID NO: 2
110 <211> LENGTH: 256
111 <212> TYPE: PRT
112 <213> ORGANISM: zea mays
114 <220> FEATURE:
115 <221> NAME/KEY: VARIANT
116 <222> LOCATION: (1)...(256)
117 <223> OTHER INFORMATION: Xaa = Any Amino Acid
119 <400> SEQUENCE: 2
120 Met Gly Lys Tyr Met Arg Lys Cys Arg Gly Ala Ala Gly Ala Glu Val
121 1 5 10 15

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RAW SEQUENCE LISTING

DATE: 10/19/2005

PATENT APPLICATION: US/09/993,808D

TIME: 15:08:07

Input Set : A:\1146E.SEQLIST.TXT

Output Set: N:\CRF4\10192005\I993808D.raw

```

122  Ala Ala Val Glu Val Thr Gln Val Val Gly Val Arg Thr Arg Ser Arg
123              20              25              30
124  Ser Ala Ala Ala Thr Gly Gly Val Ala Lys Val Ala Pro Arg Arg Lys
125              35              40              45
126  Arg Ala Pro Ala Gly Glu Pro Ala Ala Ala Val Ser Ala Gly Gly Asp
127              50              55              60
128  Gly Gly Ser Cys Tyr Ile His Leu Arg Ser Arg Met Leu Phe Met Ala
129              65              70              75              80
130  Pro Pro Gln Pro Gln Pro Ser Val Asp Ser Val Pro Thr Pro Val Glu
131              85              90              95
132  Ala Ala Asp Gly Ala Ala Gly Gln Gln Gly Ala Ala Leu Ala Ala Gly
133              100             105             110
134  Leu Ser Arg Cys Ser Ser Thr Ala Ser Ser Val Asn Leu Gly Leu Gly
135              115             120             125
136  Gly Gln Arg Gly Ser His Thr Cys Arg Ser Tyr Asp Ala Ala Glu Ala
137              130             135             140
138  Gly Gly Asp His Val Leu Val Asp Val Ser Ala Ala Ser Asn Ser Gly
139              145             150             155             160
140  Ser Gly Pro Asp Arg Glu Arg Arg Glu Thr Thr Pro Ser Ser Arg Ala
141              165             170             175
142  His Gly Glu Leu Ser Asp Leu Glu Ser Asp Leu Ala Gly His Lys Thr
143              180             185             190
144  Gly Pro Ser Leu Pro Ala Ala Thr Pro Ala Ala Glu Leu Ile Val Pro
145              195             200             205
146  Pro Ala His Glu Ile Gln Glu Phe Phe Ala Ala Ala Glu Ala Ala Gln
147              210             215             220
148  Ala Lys Arg Phe Ala Ser Lys Tyr Asn Phe Asp Phe Val Arg Gly Val
149              225             230             235             240
150  Pro Leu Asp Ala Gly Gly Arg Phe Glu Trp Ala Pro Val Val Ser Ile
151              245             250             255
156 <210> SEQ ID NO: 3
157 <211> LENGTH: 1089
158 <212> TYPE: DNA
159 <213> ORGANISM: zea mays
161 <220> FEATURE:
162 <221> NAME/KEY: CDS
163 <222> LOCATION: (154)...(724)
165 <400> SEQUENCE: 3
166  cccacgcgtc cgccctcctg tgtacaccac tcccgcctcg cctaccatgt tatccccgcc      60
167  tctcctggcc tctgcgcgcc cgctgcacag aatcgcttgg tgcaccctgc gagggcctcc      120
168  tcgaaaccct agcttgccca gccctccggt gcc atg ggc aag tac atg cgc aag      174
169                      Met Gly Lys Tyr Met Arg Lys
170                      1                      5
172  gcc aag gct tcc agc gag gtt gtc atc atg gat gtc gcc gcc gct ccg      222
173  Ala Lys Ala Ser Ser Glu Val Val Ile Met Asp Val Ala Ala Ala Pro
174              10              15              20
176  ctc gga gtc cgc acc cga gcg cgc gcc ctc gcg ctg cag cgt ctg cag      270
177  Leu Gly Val Arg Thr Arg Ala Arg Ala Leu Ala Leu Gln Arg Leu Gln
178              25              30              35

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RAW SEQUENCE LISTING

DATE: 10/19/2005

PATENT APPLICATION: US/09/993,808D

TIME: 15:08:07

Input Set : A:\1146E.SEQLIST.TXT

Output Set: N:\CRF4\10192005\I993808D.raw

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180 gag cag cag acg cag tgg gag gaa ggt gct ggc ggc gag tac ctg gag      318
181 Glu Gln Gln Thr Gln Trp Glu Glu Gly Ala Gly Gly Glu Tyr Leu Glu
182 40                                45                                50                                55
184 cta agg aac cgg agg ctc gag aag ctg ccg ccg ccg ccg gcg acc acg      366
185 Leu Arg Asn Arg Arg Leu Glu Lys Leu Pro Pro Pro Pro Ala Thr Thr
186                                60                                65                                70
188 agg agg tcg ggc ggg agg aaa gcg gca gcc gag gcc gcc gca act aag      414
189 Arg Arg Ser Gly Gly Arg Lys Ala Ala Ala Glu Ala Ala Ala Thr Lys
190                                75                                80                                85
192 gag gct gag gcg tcg tac ggg gag aac atg ctc gag ttg gag gcc atg      462
193 Glu Ala Glu Ala Ser Tyr Gly Glu Asn Met Leu Glu Leu Glu Ala Met
194                                90                                95                                100
196 gag agg att acc agg gag acg acg cct tgc agc ttg att aac acc cag      510
197 Glu Arg Ile Thr Arg Glu Thr Thr Pro Cys Ser Leu Ile Asn Thr Gln
198                                105                                110                                115
200 atg act agc act cct ggg tcc acg aga tcc agc cac tct tgc cac cgc      558
201 Met Thr Ser Thr Pro Gly Ser Thr Arg Ser Ser His Ser Cys His Arg
202 120                                125                                130                                135
204 agg gtg aac gct cct ccg gtg cac gcc gtc cca agt tcg agg gag atg      606
205 Arg Val Asn Ala Pro Pro Val His Ala Val Pro Ser Ser Arg Glu Met
206                                140                                145                                150
208 aat gag tac ttc gct gcc gaa cag cga cgc caa caa cag gat ttc att      654
209 Asn Glu Tyr Phe Ala Ala Glu Gln Arg Arg Gln Gln Gln Asp Phe Ile
210                                155                                160                                165
212 gac aag tac aac ttc gat cct gca aac gac tgc cct ctc cca ggc agg      702
213 Asp Lys Tyr Asn Phe Asp Pro Ala Asn Asp Cys Pro Leu Pro Gly Arg
214                                170                                175                                180
216 ttt gag tgg gtg aag cta gac t gatggattca gagggacgag agagcagcag      754
217 Phe Glu Trp Val Lys Leu Asp
218                                185                                190
220 gcatggaatg gaatggaact caccgccgc tccctccaca ccaccaccagc gttgtggcag      814
221 aggcgcatac cgctcgtgta gcttcggttc tgctgtaaaa aaaaacttag tgttttagca      874
222 tgtagcctta attggtcgtg tgttacagta cagaactgat gctgagttac aacaccctga      934
223 tctggtcctg atctgatccc tcaactccaa tgtaaccctt aacagctcat tctgtaagga      994
224 acctgtcacc ctgttacctg ttgctgaact aatgaagtag agctagataa tgacgtttta     1054
225 tcgtagttaa aaaaaaaaaa aaaaaggcg gccgc                                1089
227 <210> SEQ ID NO: 4
228 <211> LENGTH: 190
229 <212> TYPE: PRT
230 <213> ORGANISM: zea mays
232 <400> SEQUENCE: 4
233 Met Gly Lys Tyr Met Arg Lys Ala Lys Ala Ser Ser Glu Val Val Ile
234 1                                5                                10                                15
235 Met Asp Val Ala Ala Ala Pro Leu Gly Val Arg Thr Arg Ala Arg Ala
236                                20                                25                                30
237 Leu Ala Leu Gln Arg Leu Gln Glu Gln Thr Gln Trp Glu Glu Gly
238                                35                                40                                45
239 Ala Gly Gly Glu Tyr Leu Glu Leu Arg Asn Arg Arg Leu Glu Lys Leu
240                                50                                55                                60

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RAW SEQUENCE LISTING

DATE: 10/19/2005

PATENT APPLICATION: US/09/993,808D

TIME: 15:08:07

Input Set : A:\1146E.SEQLIST.TXT

Output Set: N:\CRF4\10192005\I993808D.raw

241	Pro	Pro	Pro	Pro	Ala	Thr	Thr	Arg	Arg	Ser	Gly	Gly	Arg	Lys	Ala	Ala
242	65					70					75				80	
243	Ala	Glu	Ala	Ala	Ala	Thr	Lys	Glu	Ala	Glu	Ala	Ser	Tyr	Gly	Glu	Asn
244					85					90					95	
245	Met	Leu	Glu	Leu	Glu	Ala	Met	Glu	Arg	Ile	Thr	Arg	Glu	Thr	Thr	Pro
246				100					105					110		
247	Cys	Ser	Leu	Ile	Asn	Thr	Gln	Met	Thr	Ser	Thr	Pro	Gly	Ser	Thr	Arg
248			115					120					125			
249	Ser	Ser	His	Ser	Cys	His	Arg	Arg	Val	Asn	Ala	Pro	Pro	Val	His	Ala
250		130					135					140				
251	Val	Pro	Ser	Ser	Arg	Glu	Met	Asn	Glu	Tyr	Phe	Ala	Ala	Glu	Gln	Arg
252	145					150					155					160
253	Arg	Gln	Gln	Gln	Asp	Phe	Ile	Asp	Lys	Tyr	Asn	Phe	Asp	Pro	Ala	Asn
254					165				170						175	
255	Asp	Cys	Pro	Leu	Pro	Gly	Arg	Phe	Glu	Trp	Val	Lys	Leu	Asp		
256			180						185					190		
258	<210> SEQ ID NO: 5															
259	<211> LENGTH: 841															
260	<212> TYPE: DNA															
261	<213> ORGANISM: zea mays															
263	<220> FEATURE:															
264	<221> NAME/KEY: CDS															
265	<222> LOCATION: (159)...(841)															
266	<223> OTHER INFORMATION: r = nucleotide a or g; Xaa = Any Amino Acid															
268	<400> SEQUENCE: 5															
269	cccacgcgtc	cgagtagaat	ccaaagcgca	agcggctgca	gcctgcaggc	agcgccgcgc										60
270	aggcgtggga	gtggccgagt	gggagtggga	gtgaaaaaga	ggaaccggcc	aagagaagca										120
271	agcgagaaga	aggcagtgtc	gcggcggcgt	tccgtaag	atg ggg aag tac	atg cgc										176
272																
273																
275	aag cgc agg	ggg gcc gcg	ggc gag ggg	gtg gcc gca	gtc gag gtc	tcg										224
276	Lys Arg Arg	Gly Ala Ala	Gly Glu Gly	Val Ala Ala	Val Glu Val	Ser										
277		10		15		20										
279	cag gtc gtc	ggc gtc cgg	acg agg tcc	agg tcc gcg	gcg gcg acc	ggc										272
280	Gln Val Val	Gly Val Arg	Thr Arg Ser	Arg Ser Ala	Ala Ala Thr	Gly										
281		25		30		35										
283	ggc ggt gtc	gcg aag gtc	gct ccg ccg	agg agg aag	aag aag gcg	ctg ctg										320
284	Gly Gly Val	Ala Lys Val	Ala Pro Pro	Arg Arg Lys	Lys Ala Leu	Leu										
285		40		45		50										
287	ccc gcc gcg	aac gtg acg	acg tcg ggg	gag cct ggt	gcc gtg ggc	gct										368
288	Pro Ala Ala	Asn Val Thr	Thr Ser Gly	Glu Pro Gly	Ala Val Gly	Ala										
289	55		60		65											70
291	ggt ggt ggg	gac ggc gga	agc tgc tgc	tac atc cac	ctg cgg agc	cgc										416
292	Gly Gly Gly	Asp Gly Gly	Ser Cys Cys	Tyr Ile His	Leu Arg Ser	Arg										
293		75		80		85										
295	atg ctg ttc	atg gca gca	cct cag cag	caa ccg tcg	gcg gct ctg	acg										464
296	Met Leu Phe	Met Ala Ala	Pro Gln Gln	Gln Pro Ser	Ala Ala Leu	Thr										
297		90		95		100										
299	ccg gtg gag	gct gct ggt	gcg gca car	caa ggc ggg	gtg gtg gcg	ctc										512

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/19/2005
PATENT APPLICATION: US/09/993,808D TIME: 15:08:08

Input Set : A:\1146E.SEQLIST.TXT
Output Set: N:\CRF4\10192005\I993808D.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; Xaa Pos. 111

Seq#:6; Xaa Pos. 111

Seq#:8; N Pos. 6,18

Seq#:9; N Pos. 6

VERIFICATION SUMMARY

DATE: 10/19/2005

PATENT APPLICATION: US/09/993,808D

TIME: 15:08:08

Input Set : A:\1146E.SEQLIST.TXT

Output Set: N:\CRF4\10192005\I993808D.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application No

L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:300 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:512

L:355 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:96

L:395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0

L:409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0